

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/000094

## A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. <sup>7</sup>: F24D 5/04, 15/00, F24J 2/04, 2/42, E04D 13/18

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC F24D 5/00, 15/00, F24J 2/04, 2/42, E04D 13/18

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI IPC + KEYWORDS (solar, duct)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|-----------|--|-----------------------|
| X         | WO 1998/057101 A (RØSTVIK, Harald, N.) 17 December 1998<br>See entire document   | 1-4, 6-18             |
| X         | EP 864824 A (VIESSMANN WERKE GmbH & CO.) 16 September 1998<br>See entire document  | 1-4, 6-12             |
| X         | DE 20100746 U (SCHÜCO INTERNATIONAL KG) 19 April 2001<br>See entire document   | 1-4, 9                |
| X         | Patent Abstract of Japan, JP 11-006655 A (SHIMODA HIROSHI) 12 January 1999<br>& JP 11-006655 A<br>See abstract & entire document | 1-4                   |



Further documents are listed in the continuation of Box C



See patent family annex

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"E" earlier application or patent but published on or after the international filing date

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"O" document referring to an oral disclosure, use, exhibition or other means

"&amp;"

document member of the same patent family

"P" document published prior to the international filing date but later than the priority date claimed

Date of the actual completion of the international search

17 March 2004

Date of mailing of the international search report

22 MAR 2004

Name and mailing address of the ISA/AU

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C (Continuation).

## DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                              | Relevant to claim No. |
|-----------|---|-----------------------|
| X         | Derwent Abstract Accession No.74627A/42 ,Class J08, DT 2715759 A (HAUGG F GMBH) 12 October 1978<br>See abstract | 1-2                   |
| A         | EP 964967 B (UTI HOLDING + MANAGENENT AG) 11 July 2001<br>See entire document                                   |                       |
| A         | WO 2002/031415 A (BROATCH, Peter, Martin) 18 April 2002<br>See entire document                                  |                       |

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**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
Because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
Because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
Because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1. Claims 1-18 directed to an air duct having a thermal solar absorber.
  2. Claims 19-21 directed to a method of sealing adjacent air ducts.
  3. Claims 22-23 directed to a method of joining an array of cells of solar thermal absorber cells.  
See reasons in Supplemental Box.
1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
  2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-18

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**Supplemental Box**

(To be used when the space in any of Boxes I to VIII is not sufficient)

**Continuation of Box No: III**

The international application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion the International Searching Authority has found that there are different inventions as follows:

1. Claims 1-18 directed to an air duct having a thermal solar absorber. It is considered that the transparent pane and duct upper surface are substantially co-extensive comprises a first "special technical feature".
2. Claims 19-21 directed to a method of sealing adjacent air ducts. It is considered that moving the ducts vertically to generate a horizontal component of force which compresses strip of resilient material to thereby seal comprises a second special technical feature.
3. Claims 22-23 directed to a method of joining an array of cells of solar thermal absorber cells. It is considered that overlapping one longitudinal edge of the longitudinal adjacent cell comprises a third special technical feature.

Since the abovementioned groups of claims do not share any of the technical features identified, a "technical relationship" between the inventions, as defined in PCT rule 13.2 does not exist. Accordingly the international application does not relate to one invention or to a single inventive concept, a priori.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2004/000094

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent Document Cited in<br>Search Report |          |    |          | Patent Family Member |          |    |           |
|---|----------|----|----------|----------------------|----------|----|-----------|
| WO  | 9857101  | AU | 80413/98 | EP                   | 0991901  | NO | 972738    |
| EP  | 0864824  | DE | 19710915 | TR                   | 9800468  |    |           |
| DE  | 20100746 |    |          |                      |          |    |           |
| JP  | 11006655 |    |          |                      |          |    |           |
| DE  | 2715759  | CH | 634399   | FR                   | 2386788  |    |           |
| EP  | 0964967  | AU | 53136/98 | AU                   | 80140/98 | DE | 19644284  |
|   |          | DE | 19718568 | WO                   | 9850737  | ZA | 9803208   |
| WO  | 0231415  | AU | 92098/01 | EP                   | 1332322  | ZA | 200302575 |
| END OF ANNEX                              |          |    |          |                      |          |    |           |